

Application No.: 10/826,660
Filing Date: April 16, 2004

REMARKS

Claims 1-9 were pending prior to the amendments herein. Claim 1 is amended herein. New Claims 10-20 have been added. Claims 1-20 are therefore pending for consideration.

Claim Amendments

The Applicant has amended Claim 1 to recite that the aluminum layer is directly over the electrically conductive and optically transparent layer. The Applicant submits that this amendment is fully supported by the application as originally filed and that no new matter is added by this amendment.

Response to Rejections Under 35 U.S.C. § 103

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,329,750 to Hofmann et al. in view of U.S. Patent No. 6,650,043 to Derraa. The Applicant respectfully traverses the present rejection because Hofmann, either alone or in combination with Derraa, fails to teach or suggest all of the features of the rejected claims.

Claim 1

The Applicant submits that Hofmann, either alone or in combination with Derraa, does not teach or suggest all of the features of Claim 1. The Applicant agrees with the Office Action that Hofmann discloses a substrate 401, an electrically conductive and optically transparent layer 402 over the substrate 401, and an aluminum layer 502 over the electrically conductive and optically transparent layer 402. *See* Hofmann at col. 8, ll. 37-40 & col. 9, l. 40 – col. 10, l. 5 and Fig. 5. Between the oxidizable material 501, Hofmann discloses that the aluminum layer 502 is directly over the electrically conductive and optically transparent layer 402, so any reviewers of the prosecution history of this application shall appreciate that the amendment to Claim 1 has not been made to overcome the cited references.

Hofmann at least fails to teach “a metallic protective layer over the aluminum layer,” as recited by Claim 1. The Office Action attempts to cure this deficiency by combination with Derraa. Derraa discloses a chromium metallic protective layer 324 over an aluminum primary conductive line 323. *See* Derraa at col. 6, ll. 39-44 and Fig. 3A. The Applicant submits that combination with Hofmann to place the chromium layer 324 of Derraa over the aluminum layer

502 of Hofmann is improper, at least because the reason for combination asserted in the Office Action (i.e., that the chromium layer protects the aluminum layer against corrosion caused by etchants during fabrication) is irrelevant to the teaches of the references.

In Derraa, the chromium layers 322, 324 are configured to shield the aluminum layer 323 from contact with silicon-based layers 202, 204. *See* Derraa at col. 6, l. 67 – col. 7, l. 3. In Hofmann, the aluminum layer 502 directly contacts the silicon features 501. Thus, assuming that a skilled artisan would be motivated to shield the aluminum layer 502 from the silicon layer 501 in Hofmann, the protective layer 324 of Derraa would be disposed *between* the aluminum layer 502 and the silicon layer 501 and *below* the aluminum layer 502, *not over* or directly over the aluminum layer 502. Indeed, silicon is not formed over the aluminum layer 502 in Hofmann, and thus there would be no reason to provide a chromium layer 324 over the aluminum layer 502. Thus, combination of Hofmann and Derraa fails to teach or suggest the elements recited by Claim 1.

The Applicant acknowledges that Derraa discloses that the chromium layer 324 may also protect the aluminum primary conductive lines 323 from corrosion. *See* Derraa at col. 9, ll. 39-45. This may increase yield because the primary conductive lines 323, which route electrical signals in the final product are advantageously less corroded. However, this purported motivation is inapplicable to the aluminum layer 502 of Hofmann. First, the aluminum layer 502 is removed prior to the end of the fabrication process, and thus corrosion at an intermediate stage of processing would not affect yield. *See* Hofmann at col. 12, ll. 1-4. Second, the aluminum layer 502 does not route electrical signals. Rather, the aluminum layer 502 covers the oxidizable material 501 to prevent the oxidizable material 501 from being oxidized, and Hofmann does not contemplate corrosion being relevant to this function of the aluminum layer 502. Thus, a skilled artisan would have no apparent reason to deposit a protective layer over or directly over the aluminum layer 502 of Hofmann.

Therefore, the Applicant submits that Claim 1 is patentable over Hofmann, either alone or in combination with Derraa. The Applicant respectfully requests that the Examiner withdraw the rejection of Claim 1.

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Claims 2-9

As described above, Claim 1 is patentable over Hofmann, either alone or in combination with Derraa. Claims 2-9 depend from Claim 1. Thus, Claims 2-9 include all of the features of Claim 1 and recite unique combinations of additional features not taught or suggested by the cited references. Therefore, the Applicant respectfully requests that the Examiner withdraw the rejections of Claims 2-9.

New Claims

Claims 10-20 have been added and are fully supported by the application as originally filed. The Applicant submits that independent Claims 10 and 15 are allowable at least for the reason described above with respect to Claim 1. Furthermore, each of the new independent claims recites further distinguishing features of particular utility.

The Applicant submits that Claims 11-14, which depend from, and include all the features of, Claim 10, are also allowable. The Applicant submits that Claims 16-20, which depend from, and include all the features of, Claim 15, are also allowable. Furthermore, each of the new dependent claims recites further distinguishing features of particular utility.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicant expressly reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child, or related prosecution history shall not reasonably infer that the Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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Summary

The Applicant respectfully submits that all of the pending claims are allowable and requests that the Examiner withdraw the rejections and pass Claims 1-20 to allowance.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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